

Industrial Products Catalog

Effective July 1, 1981

Bondhus Tools

The Timesavers

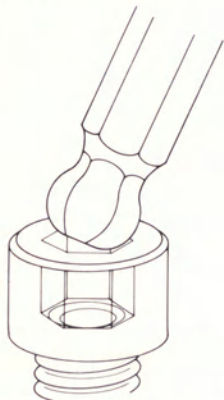




Bondhus Tools

The Timesavers

High Torque Balldriver™ Hex Tools Introduced



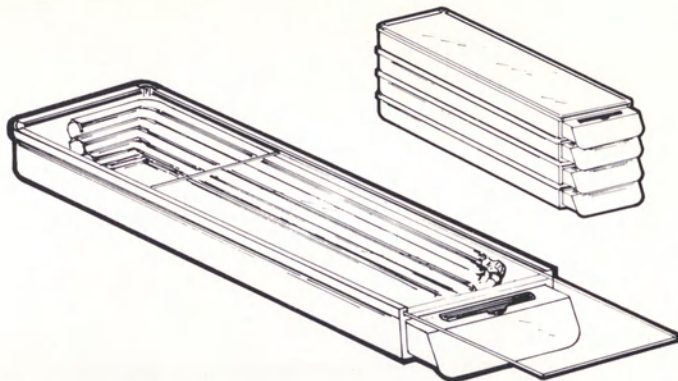
NEW STYLE



OLD STYLE

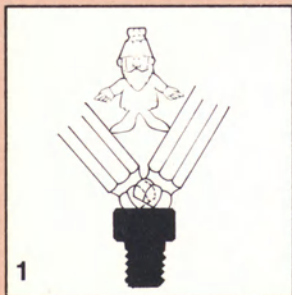
A new improved design on Balldriver™ tools increases torque capacity by up to 100%. This unique design is patented.

New Convenience Pack

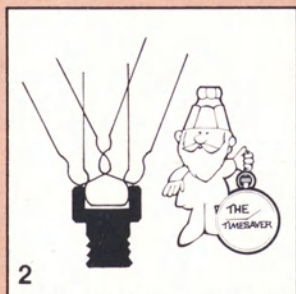


Balldriver™ L-wrenches and chamfered L-wrenches are now packaged in our new convenience pack. The convenient plastic case is reusable, color coded (yellow-inch/red-metric), and designed for easy stacking or hanging.

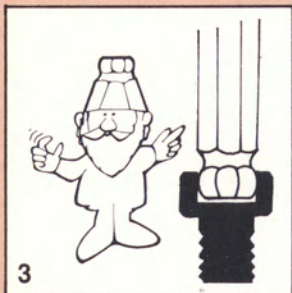
How Balldriver™ Tools Save Time



1



2



3



4

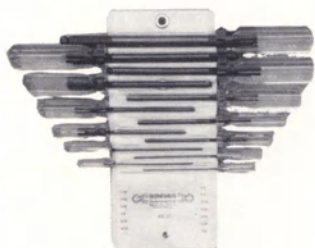
1. Angle entry permits easy access even in restricted or hard to reach areas. Off-axis rotation speeds up fastener application or removal. Fasteners can be driven or loosened at angles up to 30°.
2. Fast funnel entry allows Balldriver™ tools to slide easily into socket and achieve full socket engagement with a single snap-in motion. No more wasted time "feeling" the tool into the socket.
3. Positive full depth engagement of Balldriver™ tools overcome most "stripping" problems. It is generally impossible to determine whether a standard tool is fully engaged in the socket. When it is not, stripping problems often occur.
4. Faster insertion and removal because tool follows natural wrist and hand rotation. Balldriver™ tools will turn a full 360° in locations where standard hex-tools cannot, thus saving valuable time.



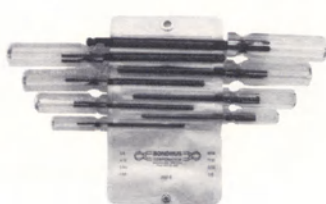
Balldriver™ Hex Tools

Balldriver™ tools make standard hex-tools obsolete. Made of AISI-SAE 8650 heat-treated alloy steel, handles and blade length are proportioned to ball size allowing users to tighten manually without fear of

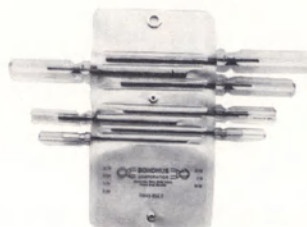
breakage. Metric and inch size handles are color coded and stamped with size for easy identification. The Balldriver™ hex tools have been proven cost-effective in most assembly and service operations.



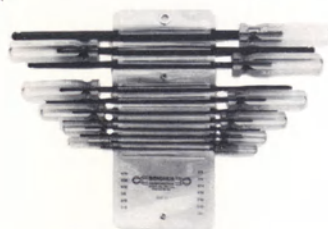
10637 BSX 13
Set of 13 Balldriver™ hex tools in plastic case. Sizes: .050 thru 3/8.



10633 BSX 8
Set of 8 Balldriver™ hex tools in plastic case. Sizes: 7/64 thru 5/16.



10645 BSX 7
Set of 7 Balldriver™ hex tools in plastic case. Sizes: 5/64 thru 3/16.



10737 BSX 11L
Set of 11 Balldriver™ hex tools longer length in plastic case. Sizes: 5/64 thru 3/8.



10733 BSX 8mmL
Set of 8 metric Balldriver™ hex tools longer length in plastic case. Sizes: 2, 2.5, 3, 4, 5, 6, 8 and 10mm.



10699 BSX 9mm
Set of 9 metric Balldriver™ hex tools in plastic case. Sizes 1.5, 2, 2.5, 3, 4, 5, 6, 8 and 10mm.



10686 BSX 6mm
Set of 6 metric Balldriver™ hex tools in plastic case. Sizes: 1.5, 2, 2.5, 3, 4 and 5mm.

Catalog No.	Size	Length	Package Quantity
Inch Sizes 106 Series			
10602	.050 BS	3.3 in.	6
10603	1/16 BS	3.4 in.	6
10604	5/64 BS	3.6 in.	6
10605	3/32 BS	3.8 in.	6
10606	7/64 BS	3.0 in.	6
10607	1/8 BS	3.2 in.	6
10608	9/64 BS	3.3 in.	6
10609	5/32 BS	3.6 in.	6
10610	3/16 BS	3.8 in.	6
10611	7/32 BS	4.3 in.	6
10612	1/4 BS	4.8 in.	6
10613	5/16 BS	5.6 in.	6
10614	3/8 BS	6.6 in.	6
10615	7/16 BS	7.6 in.	1
10616	1/2 BS	8.6 in.	1
Longer Length Inch 107 Series			
10704	5/64L BS	5 in.	6
10705	3/32L BS	5.5 in.	6
10706	7/64L BS	6 in.	6
10707	1/8L BS	6.5 in.	6
10708	9/64L BS	7 in.	6
10709	5/32L BS	7.5 in.	6
10710	3/16L BS	8 in.	6
10711	7/32L BS	8.5 in.	6
10712	1/4L BS	9 in.	6
10713	5/16L BS	9.5 in.	6
10714	3/8L BS	10 in.	6
Metric Sizes 106 Series			
10649	1.27mm BS	81mm	6
10650	1.5mm BS	89mm	6
10652	2mm BS	93mm	6
10654	2.5mm BS	100mm	6
10656	3mm BS	82mm	6
10658	3.5mm BS	90mm	6
10660	4mm BS	100mm	6
10662	4.5mm BS	110mm	6
10664	5mm BS	116mm	6
10666	5.5mm BS	128mm	6
10668	6mm BS	141mm	6
10670	7mm BS	147mm	6
10672	8mm BS	165mm	6
10674	9mm BS	177mm	6
10676	10mm BS	191mm	6
Longer Length Metric 107 Series			
10752	2mmL BS	120mm	6
10754	2.5mmL BS	140mm	6
10756	3mmL BS	160mm	6
10760	4mmL BS	180mm	6
10764	5mmL BS	200mm	6
10768	6mmL BS	220mm	6
10772	8mmL BS	240mm	6
10776	10mmL BS	260mm	6



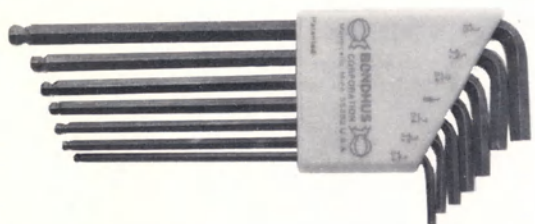
Balldriver™ L-Wrenches

Balldriver™ L-wrench sets feature the patented Bondhex™ case. Each wrench slips easily into its own marked slot and locks securely into place. The compact Bondhex™ L-wrench sets are ideal where multiple sizes are needed.

Balldriver™ L-wrenches are two tools in one. The ball end provides the convenience and speed of off-axis rotation and the long-arm provides the leverage to attain full torque. Whenever hex-fasteners are used, Balldriver™ L-wrenches are an indispensable tool.



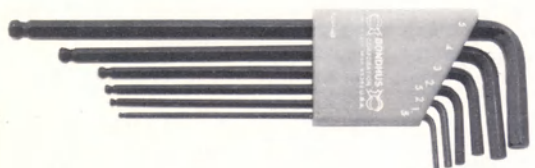
10936 BLX 12
Set of 12 Balldriver™ L-wrenches in BONDHEX™ case. Sizes: .050 thru 5/16.



10945 BLX 7
Set of 7 Balldriver™ L-wrenches in BONDHEX™ case. Sizes: 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, and 3/16.



10999 BLX 9mm
Set of 9 metric Balldriver™ L-wrenches in BONDHEX™ case. Sizes: 1.5, 2, 2.5, 3, 4, 5, 6, 8 and 10mm.



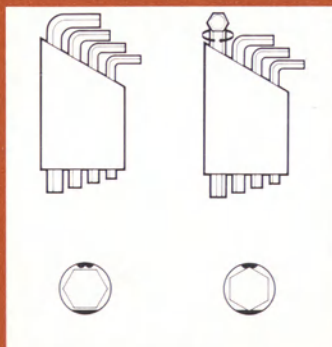
10946 BLX 6mm
Set of 6 metric Balldriver™ L-wrenches in BONDHEX™ case. Sizes: 1.5, 2, 2.5, 3, 4, and 5mm.

Catalog No.	Size	Length	Package Quantity
Inch Sizes 109 Series			
10902	.050	BL 2.8 in.	6
10903	1/16	BL 3.0 in.	6
10904	5/64	BL 3.2 in.	6
10905	3/32	BL 3.4 in.	6
10906	7/64	BL 3.6 in.	6
10907	1/8	BL 3.7 in.	6
10908	9/64	BL 3.9 in.	6
10909	5/32	BL 4.1 in.	6
10910	3/16	BL 4.5 in.	6
10911	7/32	BL 4.9 in.	6
10912	1/4	BL 5.2 in.	6
10913	5/16	BL 6.0 in.	6
10914	3/8	BL 6.7 in.	6
10915	7/16	BL 7.5 in.	2
10916	1/2	BL 8.2 in.	2
10917	9/16	BL 9.0 in.	2
10918	5/8	BL 9.7 in.	2
10919	3/4	BL 11.2 in.	1

Metric Sizes 109 Series			
10949	1.27mm	BL 72mm	6
10950	1.5mm	BL 80mm	6
10952	2mm	BL 85mm	6
10954	2.5mm	BL 90mm	6
10956	3mm	BL 95mm	6
10958	3.5mm	BL 100mm	6
10960	4mm	BL 110mm	6
10962	4.5mm	BL 120mm	6
10964	5mm	BL 130mm	6
10966	5.5mm	BL 140mm	6
10968	6mm	BL 150mm	6
10970	7mm	BL 155mm	6
10972	8mm	BL 170mm	6
10974	9mm	BL 180mm	6
10976	10mm	BL 190mm	6
10978	11mm	BL 200mm	2
10980	12mm	BL 220mm	2
10984	14mm	BL 260mm	2
10986	17mm	BL 280mm	1
10988	19mm	BL 295mm	1

BONDHEX™ PATENTED CASE

The patented Bondhex™ L-wrench cases are color-coded for inch and metric sizes.



**NEW**

Chamfered L-Wrenches

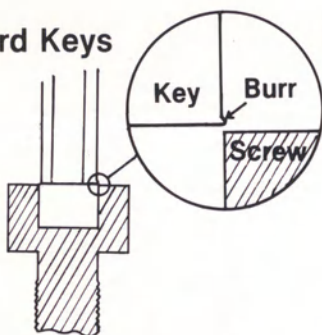
To prevent socket reaming, the clearance between the screw and key is usually less than .001" (.025 mm) per side. On normal wrenches the cutoff burr is usually larger than this and interferes with socket entry. The

milled chamfer removes this burr eliminating the problem.

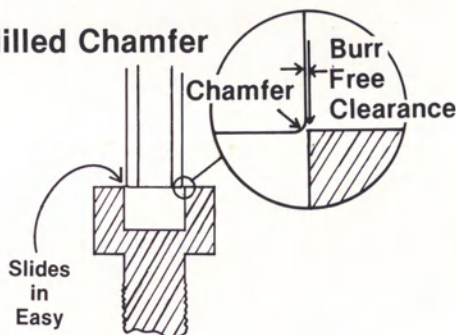
For easy size identification, sizes 5/64" (2mm) and larger are stamped on the long arm.

The Chamfer Difference

Standard Keys



New Milled Chamfer



The Bondhus Milled Chamfer eliminates the cutoff burr and helps lead the key easily into the socket.



12136 HLX 12L

Set of 12 chamfered L-wrenches in BONDHEX™ case. Sizes: .050 thru 5/16.



12145 HLX 7L

Set of 7 chamfered L-wrenches in BONDHEX™ case. Sizes: 5/64 thru 3/16.



12199 HLX 9mmL

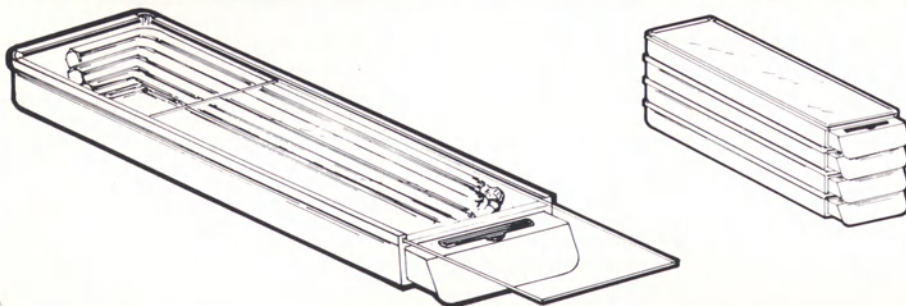
Set of 9 metric chamfered L-wrenches in BONDHEX™ case. Sizes: 1.5, 2, 2.5, 3, 4, 5, 6, 8 and 10mm



12146 HLX 6mmL

Set of 6 metric chamfered L-wrenches in BONDHEX™ case. Sizes: 1.5, 2, 2.5, 3, 4 and 5mm

Convenience Pack



Balldriver™ L-wrenches and chamfered L-wrenches are now in a convenient, reusable plastic case, color coded for easy identification between inch and metric.

Catalog No.	Size	Length	Package Quantity
Inch Sizes Long Arm 121 Series			
12100	.028L	HL 2.6 in.	10
12101	.035L	HL 2.7 in.	10
12102	.050L	HL 2.8 in.	10
12103	1/16L	HL 3.0 in.	10
12104	5/64L	HL 3.2 in.	10
12105	3/32L	HL 3.4 in.	10
12106	7/64L	HL 3.6 in.	10
12107	1/8L	HL 3.7 in.	10
12108	9/64L	HL 3.9 in.	10
12109	5/32L	HL 4.1 in.	10
12110	3/16L	HL 4.5 in.	10
12111	7/32L	HL 4.9 in.	10
12112	1/4L	HL 5.2 in.	10
12113	5/16L	HL 6.0 in.	10
12114	3/8L	HL 6.7 in.	10
12115	7/16L	HL 7.5 in.	2
12116	1/2L	HL 8.2 in.	2
12117	9/16L	HL 9.0 in.	2
12118	5/8L	HL 9.7 in.	2
12119	3/4L	HL 11.2 in.	1

Metric Sizes Long Arm 121 Series			
12147	.71mmL	HL 66 mm	10
12148	.89mmL	HL 68 mm	10
12149	1.27mmL	HL 72 mm	10
12150	1.5mmL	HL 90 mm	10
12152	2mmL	HL 100 mm	10
12154	2.5mmL	HL 112 mm	10
12156	3mmL	HL 126 mm	10
12158	3.5mmL	HL 130 mm	10
12160	4mmL	HL 142 mm	10
12162	4.5mmL	HL 152 mm	10
12164	5mmL	HL 160 mm	10
12166	5.5mmL	HL 170 mm	10
12168	6mmL	HL 180 mm	10
12170	7mmL	HL 190 mm	10
12172	8mmL	HL 200 mm	10
12174	9mmL	HL 212 mm	10
12176	10mmL	HL 224 mm	10
12178	11mmL	HL 236 mm	2
12180	12mmL	HL 250 mm	2
12184	14mmL	HL 280 mm	2
12186	17mmL	HL 320 mm	1
12188	19mmL	HL 360 mm	1



Balldriver™ Power Bits

Designed for power tools having 1/4" bit holders, Balldriver™ Power Bits provide fast entry into socket even when the tool is rotating. Exact alignment is not required for socket entry or fastener rotation. Balldriver™ Power Bits save time and increase productivity.

10836 BHX 12
Set of 12 Balldriver™ Power
Bits in convenience pack.
Sizes: 5/64 thru 1/2.

10899 BHX 9mm
Set of 9 metric Balldriver™
Power Bits in convenience
pack. Sizes: 2, 2.5, 3, 4, 5, 6, 8,
10 and 12mm.

Catalog No.	Size	Length Inches	Package Quantity
Inch Sizes 108 Series			
10804	5/64	BH 3.0	6
10805	3/32	BH 3.0	6
10806	7/64	BH 3.0	6
10807	1/8	BH 3.0	6
10808	9/64	BH 3.0	6
10809	5/32	BH 3.0	6
10810	3/16	BH 3.0	6
10811	7/32	BH 3.0	6
10812	1/4	BH 3.0	6
10813	5/16	BH 3.0	6
10814	3/8	BH 3.0	6
10816	1/2	BH 3.0	6

Catalog No.	Size	Length MM	Package Quantity
Metric Sizes 108 Series			
10852	2mm	BH 76	6
10854	2.5mm	BH 76	6
10856	3mm	BH 76	6
10860	4mm	BH 76	6
10864	5mm	BH 76	6
10868	6mm	BH 76	6
10872	8mm	BH 76	6
10876	10mm	BH 76	6
10880	12mm	BH 76	6



Balldriver™ Insert Bits

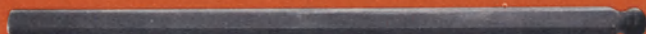
For hand and power tools having 1/4" bit adapters, Balldriver™ Insert Bits allow easy socket entry without exact alignment. Ideal for production and assembly operations where time is critical.

11036 BIX 12
Set of 12 Balldriver™ Insert
Bits in convenience pack.
Sizes: 5/64 thru 1/2.

11099 BIX 9mm
Set of 9 metric Balldriver™
Insert Bits in convenience
pack. Sizes: 2, 2.5, 3, 4, 5, 6, 8,
10 and 12mm.

Catalog No.	Size	Length Inches	Package Quantity
Inch Sizes 110 Series			
11004	5/64	BI 1.0	6
11005	3/32	BI 1.0	6
11006	7/64	BI 1.0	6
11007	1/8	BI 1.0	6
11008	9/64	BI 1.0	6
11009	5/32	BI 1.0	6
11010	3/16	BI 1.0	6
11011	7/32	BI 1.0	6
11012	1/4	BI 1.0	6
11013	5/16	BI 1.5	6
11014	3/8	BI 1.5	6
11016	1/2	BI 1.5	6

Catalog No.	Size	Length MM	Package Quantity
Metric Sizes 110 Series			
11052	2mm	BI 25	6
11054	2.5mm	BI 25	6
11056	3mm	BI 25	6
11060	4mm	BI 25	6
11064	5mm	BI 25	6
11068	6mm	BI 25	6
11072	8mm	BI 38	6
11076	10mm	BI 38	6
11080	12mm	BI 38	6



Balldriver™ Blades

Versatile Balldriver™ blades will take a variety of handle types and can be welded into special tools. Larger sizes can be used directly in socket wrenches and power tools.

Catalog No.	Size	Length Inches	Package Quantity
Inch Sizes 101 Series			
10102	.050	B 3.4	1
10103	1/16	B 3.6	1
10104	5/64	B 3.8	1
10105	3/32	B 4.0	1
10106	7/64	B 4.3	1
10107	1/8	B 4.5	1
10108	9/64	B 4.8	1
10109	5/32	B 5.0	1
10110	3/16	B 5.5	1
10111	7/32	B 6.0	1
10112	1/4	B 6.4	1
10113	5/16	B 7.3	1
10114	3/8	B 8.3	1
10115	7/16	B 9.1	1
10116	1/2	B 10.0	1
10117	9/16	B 10.9	1
10118	5/8	B 11.8	1
10119	3/4	B 13.6	1

Catalog No.	Size	Length MM	Package Quantity
Metric Sizes 101 Series			
10149	1.27mm	B 86	1
10150	1.5mm	B 94	1
10152	2mm	B 101	1
10154	2.5mm	B 108	1
10156	3mm	B 116	1
10158	3.5mm	B 123	1
10160	4mm	B 136	1
10162	4.5mm	B 147	1
10164	5mm	B 159	1
10166	5.5mm	B 171	1
10168	6mm	B 184	1
10170	7mm	B 190	1
10172	8mm	B 207	1
10174	9mm	B 220	1
10176	10mm	B 234	1
10178	11mm	B 246	1
10180	12mm	B 267	1
10184	14mm	B 317	1
10186	17mm	B 345	1
10188	19mm	B 372	1



Specials

Whatever the application, from special blade lengths to specially designed tools, Bondhus can fulfill your requirements. Over the years, our engineering staff has designed and produced many tools for special and

unusual uses. Unheat-treated hex stock is available in 3-foot lengths of AISI-SAE 8650 alloy steel. Beryllium copper and insulated tools are also available.



Circle Handle



Universal Joint



Hex Driver



Spinner Handle



Power Bit

These specially designed tools can be made for unusual applications. Call for quotation.

Torque

Handle and blade torques are shown on the accompanying table. Data is for AISI-SAE 8650 alloy steel heat-treated to specification.







Attainable torques are based upon operator strength. The handle torque data are averages for persons considered to be of "normal" strength.

Torque Capacity (Newtons*)

Blade Size	Straight Hex	Ball Tip	Average Handle	Blade Size	Straight Hex	Ball Tip	Average Handle
.028	.1	—	—	1.27 mm	.8	.3	.3
.035	.3	—	—	1.5mm	1.2	.5	.3
.050	.8	.3	.3	2mm	3.0	1.1	.9
1/16	1.5	.6	.3	2.5mm	6.0	2.2	.9
5/64	2.9	1.1	.9	3mm	9.5	3.5	2.3
3/32	5.2	1.9	.9	3.5mm	15.3	5.8	2.3
7/64	7.5	2.8	2.3	4mm	22.9	8.6	4.7
1/8	11.4	4.2	2.3	4.5mm	29.4	10.9	7.0
9/64	16.2	6.1	4.7	5mm	39.9	15.3	7.0
5/32	22.3	8.3	4.7	5.5mm	54.0	20.0	7.0
3/16	34.9	13.0	7.0	6mm	69.9	25.8	10.6
7/32	55.4	20.7	7.0	7mm	111.6	41.1	10.6
1/4	83.1	31.0	10.6	8mm	161.5	59.9	10.6
5/16	157.6	58.9	10.6	9mm	229.1	85.2	10.6
3/8	273.1	102	10.6	10mm	316.0	118.1	10.6
7/16	434.6	130	10.6	11mm	420.0	130	10.6
1/2	646.1	225	10.6	12mm	543.9	150	10.6
9/16	916.2	164.5	—	14mm	865.8	152.1	—
5/8	1268.7	223.2	—	17mm	1527.1	272.9	—
3/4	2184.9	384.1	—	19mm	2167.3	380.6	—

*1 Newton equals 8.51267 inch/lbs. or 9.80665 kg/cm

Interchangeability Table

	Socket Size  Width Across flats	Cap Screw 	Flat Head Cap Screw 	Button Head Cap Screw 	Set Screw 	Shoulder Screw 
Inch Sizes	.050	0	1, 2	1, 2	3, 4	-
	1/16	1	3, 4	3, 4	5, 6	-
	5/64	2, 3	5, 6	5, 6	8	-
	3/32	4, 5	8	8	10	-
	7/64	6	-	-	-	-
	1/8	-	10	10	1/4	1/4
	9/64	8	-	-	-	-
	5/32	10	1/4	1/4	5/16	5/16
	3/16	1/4	5/16	5/16	3/8	3/8
	7/32	-	3/8	3/8	7/16	-
	1/4	5/16	7/16	-	1/2	1/2
	5/16	3/8	1/2	1/2	5/8	5/8
	3/8	7/16, 1/2	5/8	5/8	3/4	3/4
	7/16	9/16	-	-	-	-
	1/2	5/8	3/4	-	7/8	1
	9/16	-	-	-	1, 1-1/8	-
	5/8	3/4	-	-	1-1/4, 1-3/8	1-1/4
	3/4	7/8, 1	-	-	1-1/2	-
Metric Sizes	1.27	1.4	-	-	2.5	-
	1.5	1.6, 2	-	-	3	-
	2	2.5	3	3	4	-
	2.5	3	4	4	5	-
	3	4	5	5	6	5
	4	5	6	6	8	6
	5	6	8	8	10	8
	6	8	10	10	12, 14	10
	8	10	12	12	16	12
	10	12	14, 16	14, 16	18, 20	16
	12	14	18, 20	18, 20	22, 24	20
	14	16, 18	22, 24	22, 24	-	-
	17	20, 22	-	-	-	-
	19	24, 27	-	-	-	-



BONDHUS GUARANTEE

ALL BONDHUS TOOLS ARE GUARANTEED FREE OF DEFECTS, IF ANY TOOL IS FOUND DEFECTIVE IN ANY WAY, RETURN IT TO US AND WE WILL REPLACE IT FREE OF CHARGE.

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